DARTMOUTH COLLEGE
MAY 2 - 1950

THE CHRONICLE
of Early American Industries

Volume III, No. 23 June 1950

The Woodworker In England

by L. L. THWING

The movement of European craft guilds was from simplicity in the beginning to complexity and specialization in the period from 1200 to 1500. This complexity defeated its own ends, so that by the 17th century there were fewer guild companies, but these embraced more than a single trade. In 1422 the London Brewers Guild made a list of the "crafts exercised of old and still continuing." In this list were 135 trades. Of woodworkers, there were carpenters, joiners, ceilers, tablemakers, cofferers, coopers, chariotmakers and orglemakers.

A century and a half later there would have been no guild of cofferers, tablemakers or ceilers (panel makers or wainscotters); all these would have been united in the joiners guild. In Gloucester, the coopers combined with the joiners and in Chester, even the carvers united with them.

The joiners maintained their standing as a separate guild and a separate trade until well into the 19th century, but only at the cost of many jurisdictional disputes with the carpenters and shipwrights.

The practices and associations of the craft guilds varied not only from time to time but from place to place, so that what was law and custom in one English city, did not necessarily hold in another. The Carpenters Guild was of course the oldest but as early as 1419 there were joiners as appears from an entry in the *York Rolls* for that year, where it is recorded that John Greene "was paid for certain interior finish, to wit: "Stipendi Carpentariorum Johanni Greene joyner. Pro joynacione tabularium pro libraria et planacione et groypng de wainscott." It may be noted that although John Greene called himself a joiner, the writer of the accounts called him a carpenter.

(Continued on page 213)

The Sailmaker's Gear

by M. V. BREWINGTON

Drawings by CATHARINE A. PERRY

Next to the shipcarpenter and the ropemaker the sailmaker is probably the oldest of all the specialized maritime artisans. His trade is certainly the least changed in its methods and its gear. The shipcarpenter has traded his wooden tools for ones of steel: his hand auger has given place to the electric drill and his broad axe to the band saw; the ropemaker no longer turns his winch manually as he treads the rope walk: an electric spinning machine now does all the work. But the sailmaker still cuts his cloth in the same way his trade ancestors did and no machine has yet been devised to rope a sail. In fact, practically all his tools except the sewing machine are more than a century old in design and material as well as in use.

Undoubtedly the *needle* is the oldest piece of his gear: its origin is lost in the dimness of prehistory. Just how many centuries went into its evolution we do not know nor do we know when the needle attained its specialized form for sailmaking. Both Sir William Monson (1624) and the Captain John Smith (1626) speak of needles in the boatswain's charge, obviously for sailmaking, but neither gives a word to tell us of their size or shape.

By 1676 it appears to have come into being because in that year John Davis mentioned *sail* needles in the outfit of the frigate *Degrave*, implying differences in some respect from those used in the household. But again no description of size or shape is given. Thomas Blanckley (1732) speaks of two types of needles, boltrope and sail, though once more no description aids in differentiating between them and the tailor's needle. The extant records of the Continental Navy provide little or no help: sail and boltrope needles are mentioned frequently, but no specifications are given. Their high value then, however, is shown by the careful manner in which all needles are accounted for. When

ANNUAL MEETING, STURBRIDGE, MASS., JUNE 16-17

Romme prepared his article on sailmaking, *L'Art de la Voilure* for the *Description des arts et des metiers . . .* 1761-1789, the needle had definitely taken the shape we know today. It is shown clearly in an engraving: triangular in section at the point (the blade or the 'square') becoming circular (the shank or 'wire') as the eye is approached. The blade is always slightly larger in section than the shank or the well-twisted twine so that the twine will not 'hang' as it passes through the cloth.

By 1794 nine sizes were in existence, each one having its own name: 'large marline, small do, double bolt rope, large bolt rope, small do, store, old work, tabling and flat seam,' progressing from the largest to the smallest. The United States Navy in 1826 allowed its sailmakers four sizes: 'sail, roping, marline and sewing.'

By 1844 Navy needles were described as 'seaming, 4 thread, 6 thread, 8 thread, and 10 thread'; by 1880 as 'seaming nos. 14, 15, 16, and 17, 4 thread, 6 thread, and 8 thread'; and a decade later as 'seam, 4 thread size 12, 6 thread size 9, 10 thread size 8.' Taunt classified needles as 'roping sizes 4 to 12' and 'seaming sizes 14 to 17.' Today all needles are known by numbers ranging from the smallest, size 18 (about 2⅛ inches long), to the largest, size 6 (about 4⅝ inches long).

To the untrained eye all sail needles appear to be of the same design; actually there are two: 'short square' or 'lolley' (figure 1b) and 'long square' (figure 1a). The first was originally designed by William Lolley, an English needlesmith. It is the better roping needle whereas the long square needles are preferred for seaming. The difference between the two lies solely in the proportions between the square and the shank. The curved needle (figure 1c) so often thought by laymen to be a sailmaker's needle in reality has no place in his gear bag. It is a 'packing' or 'bagging' needle used for sewing up bales cased in burlap. A sharpening stone, generally a water stone, and polishing rouge to keep the needles well pointed and clean are always a part of the equipment.

Every sailmaker seems to have a preference for the needles of a certain manufacturer, one man wanting W. Smith & Son needles and another man wanting Jas. Smith & Sons needles. These seem to be individual preferences just as one person wants a Ford and another a Chevrolet.

Needles are customarily stored in cases made of almost every kind of material: cloth, leather, wood, bone or metal. For small quantities the cases were usually tubular, at times highly decorated with carved or knotted string work (figures 2a and b). Larger numbers were stored in cloth or cloth lined leather rolls (figure 2c). All of these were made by the sailmakers in their spare time.

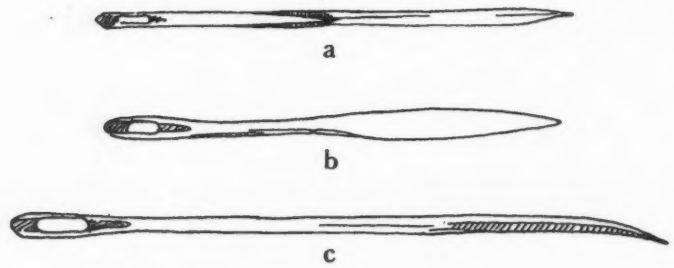


Fig. 1. NEEDLES: *a, long square; b, short square; c, bagging.*

With the needle goes the *twine.* Again even the word is lost in antiquity, but the various sizes of needles imply various sizes of twine. None are specifically mentioned in maritime literature until Steel published his work on sailmaking in 1794. He speaks of two sizes: 'Extra for seaming' and 'ordinary for roping,' but almost half a century before a merchant offered through the advertisements in the *Maryland Gazette*, 2 July 1752, 'sewing and bolt-rope twine.'

Today many sizes numbered 4 to 10 are in use and to make even stronger stuff for seaming and roping the heavier weights of canvas, the sailmaker uses two to four pieces of twine which after threading are twisted

into a single entity. The size number of the twine indicates the number of 'plys' used in spinning it. The Navy between 1844 and 1891 issued two kinds of twine for special uses: 'cotton for stitching and roping; flax for whipping and marling,' a distinction which is not held today, practically all twine being cotton with the best quality made up of so-called Egyptian fibres.

The third partner in all hand sewing is *beeswax*. This certainly has been used in sailmaking since 1732 and probably for a century earlier. Before beeswax came into use, pitch and tar thinned with lard oil seem to have been used to hold the twine in its twist, to lubricate its passage through the cloth, and to preserve it. The tallow occasionally found in sailmaker's equipment was not used in sewing but as a lubricant in splicing.

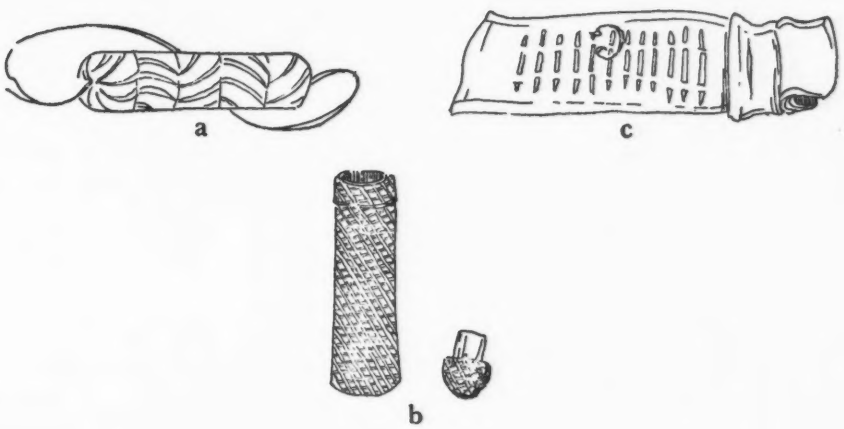


Fig. 2. NEEDLE CASES: *a and b, wood encased in string; c, flannel roll.*

Of all the sailmaker's gear, the *palm* is the tool most closely associated with the trade in the minds of laymen. Strange to say none of the early writers such as Smith, Mainwaring, or Monson mention it, and the *New English Dictionary* traces the word only to the 1769 edition of Falconer's *Marine Dictionary*. Blanckley thirty-five years before Falconer names and describes the tool.

> Palms are round pieces of iron stamp'd full with round Impressions; are sewed to Leather which comes into the Palm of the Sailmakers Hand, and are made use of by them when sewing the Seams or Boltropes on the Sails.

The engraving of Blanckley's palm (figure 3a) does not quite follow the description and probably represents an even earlier type; the iron is not round but oblong and the leather does not make a flat band about the hand; until formed by use it would lie edgewise around the hand. However, the description is so detailed one feels sure the palm had undergone considerable development before he wrote, the engraving showing one of the stages. This view is supported by a small representation of a palm in a Spanish manuscript of 1719 reproduced by de Artinano in his *Arquitectura Naval Espanola*. This palm appears to be well developed, a fingerless, half-thumbed glove bearing an oval metal plate. Falconer leaves no doubt of the shape of the English sailmaker's palm in his description: '. . . the leather (or canvas) is formed so as to encircle the hand and buttons on the back thereof.' From then at least to the present day the palm has remained the same in its design, though one should note that in the old days 'palm' referred only to the metal part while now the whole device is given the name.

Today there are two different kinds of palm: one known as a *seaming palm* (figure 3c) and the other as a *roping palm* (figure 3d). The point of distinction is in the latter which has an extension of the leather along and around the thumb so that when a boltrope is being sewed to the sail, the twine can be given a turn about the thumb leather to draw it up hard through the rope and cloth without constantly cutting the sailmaker's thumb. The roping palm does not appear until about the first third of the nineteenth century. Until 1869

palms of both kinds were made by the sailmaker for his own use. First he made a paper pattern to fit his hand, then cut the leather to shape, built up the post of leather or wood to carry the iron; and lastly sewed the parts together. The Branson Collection in the United States National Museum has, so far as is known, the only extant complete set of patterns and parts for both seaming and roping palms. When James Smith began to manufacture palms commercially in 1869 the practice of each sailmaker making his own soon died out. Sailors and sailmakers use slightly different palms for both seaming and roping. Generally, although the designs are identical, the sailor's palms are much lighter and softer than those used by sailmakers.

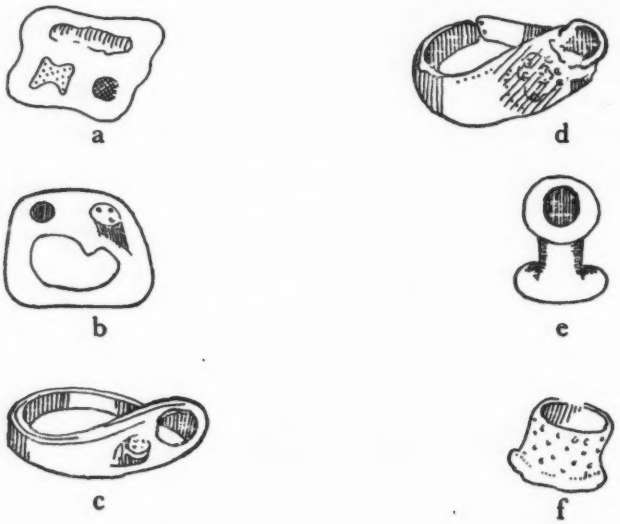


Fig. 3. PALMS: *a and b, early type; c and d, seaming and roping palms; e, thumb stall; f, thimble.*

At about the time when the roping palm came into being, another piece of gear, the *thumb stall* (figure 3e), practically disappeared. It was a tube of metal, horn or leather which fitted around the sailmaker's thumb to prevent it from being cut by the twine when tightening stitches. The roping palm, of course, made the thumb stall unnecessary. A thimble (figure 3f) has survived for very light work; it is the same as the ordinary household sewing thimble except that it is considerably heavier, uncapped, and usually is worn on the thumb.

One whole family of tools grew up for splicing, forming grommets, and working holes through cloth. These were known as *fids, marlin spikes, prickers,* and *stabbers.* The first is today always made of some hard tough wood and the last three are always of metal, usually steel. On whale ships and around the whaling ports all were frequently made of whale bone.

The earliest fids according to Mainwaring were of iron. He describes them as 'an iron pin tapering and sharp at the lower end, which is for to open the strands of the ropes when we splice two ropes together; but when we splice cables we use fids of wood in the same form and nature but much bigger which if they were made of iron would be too heavy to work withal.' These iron fids were not used in lieu of marlin spikes because Mainwaring defines them as well.

About a century later the same situation existed: the inventory of the Continental frigate *Raleigh* (1778) under the heading 'Iron work for occasional uses' are listed '2 splicing fids' along with several marlin spikes. Wooden fids were also in use as the store accounts of the Continental frigate *Boston* list '14 wooden fids.' Even today in one sail loft the fid equipment consists of seven sizes of wooden fids and three of iron fids.

For splicing, fids have been in use since the beginning of the sixteenth century at least. The *New English Dictionary* cites an example only as early as 1615 however. But a century earlier is the 'fid of yeron' mentioned in the inventory of the *Great Bark*, 1531. What its shape may have been we do not know, but it probably was little different from the fid as Mainwaring knew it: a cone rounded at the larger end. The earliest

drawing of a fid (figure 4a), that in Blanckley's *Naval Expositor*, shows it to have been curved into the shape of a cow's horn. And it is quite possible, indeed probable, that a cow's horn did precede even the 'fid of yeron': farmers spliced ropes before sailors. That horns were used as fids is established by the definition given by Duhamel Du Monceau in 1747. He wrote, 'Instrument de corne, de bouis, de bois de gayac, or de fer, pointu par un bout, qui sert à defaire des noeuds, à detortiller les torons d'un cordage &c.' That is corroborated by a cow's horn fid (figure 4b) in the collection at The Mariners' Museum. The curved type seems to have disappeared from general use about 1815.

The lengths and principal diameters of the fids varied depending upon the size of the cordage to be worked. Sometime between 1826 and 1844 the larger sized ones used chiefly for forming cringles, grommets, and eyes in boltropes began to be called *stretching, setting,* or *driving fids* (figure 4d and e) to distinguish them from the smaller sizes called *splicing fids* (figure 4c). The larger end of the setting fid was flat so that it would stand upright on the loft floor. A typical loft owned wooden splicing fids 9, 17, 18½, and 23 inches long; wooden setting fids 18 by 3⅜, 21½ by 4, 31 by 5⅜, and 39 by 6 inches; and iron fids 15½ by 1¾, 16 by 1¾, and 20½ by 2¼ inches.

It was impossible to force heavy cordage onto a setting fid or to force a splicing fid into the lay of some cables by hand. For these purposes the sailmaker used a heavy wooden mallet called a *commander* (figure 4f). This tool was in use by 1732 under the name of *driving mallet*. By 1801 both names were in use and the tool was described as being '20 inches long and 8 or 10 inches diameter with a handle three times the diameter (of the head) in length.' Three decades later the head was of iron (figure 4g) and of course much reduced in size.

In conjunction with driving fids, sailmakers frequently used a *fid block*, a cylindrical piece of wood about 18 inches high by 15 inches diameter into one end of which were bored holes approximately two-thirds the major diameter of the fids. The material to be worked was placed over one of the holes, the fid point inserted and then driven home with the commander.

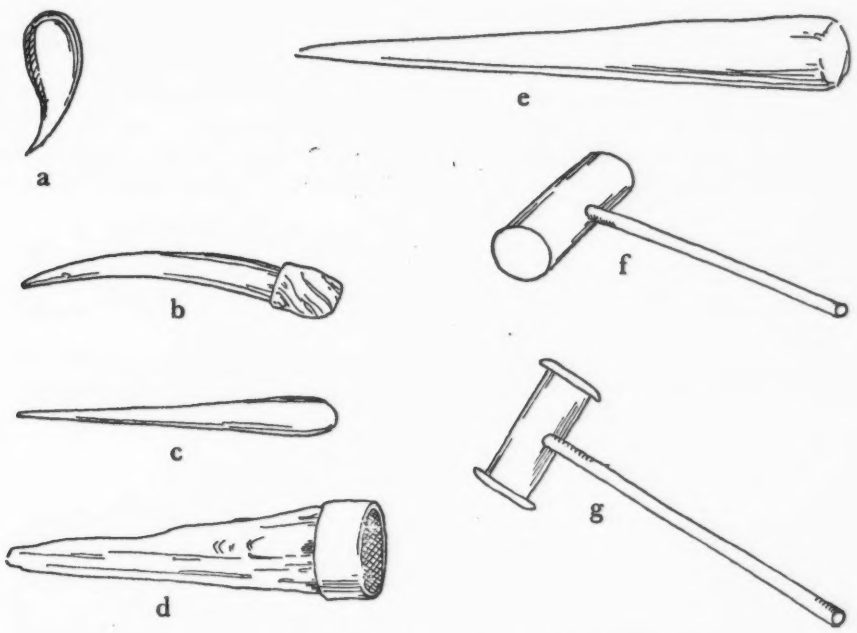


Fig. 4 FIDS: *a, early type; b, cow-horn fid; c, splicing fid; d and e, driving fids; f, commander; g, iron commander.*

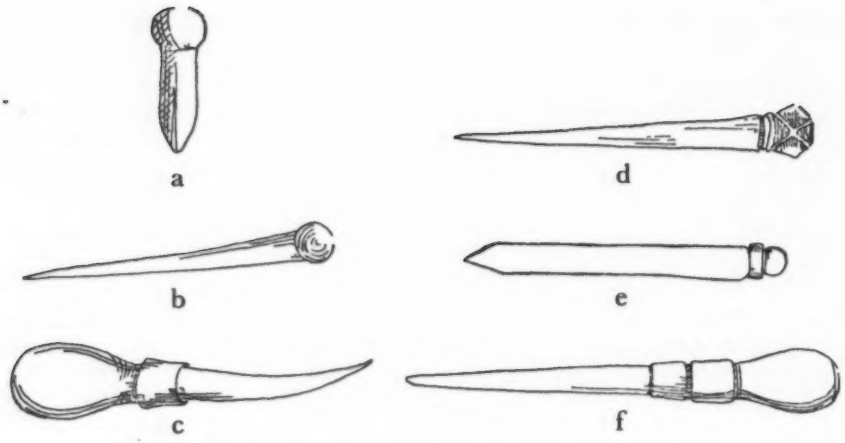


Fig. 5. MARLIN SPIKES: *a, after Blanckley; b, after Lever; c, after Steel; d and e, whale bone; f, chisel handled.*

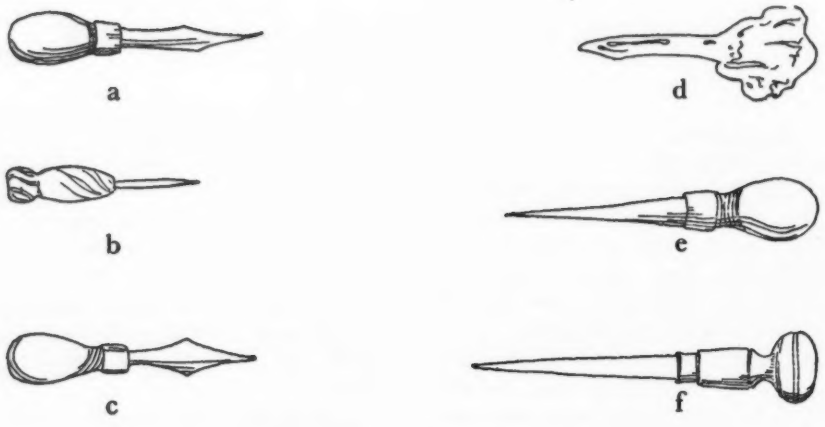


Fig. 6. AWLS, PRICKERS AND STABBERS: *a and b, awls; c, stabber; d, deer-horn pricker; e, pricker; f, pricker, modern.*

Spikes (figure 5) seem definitely to be the oldest of this family of tools. The word goes back to the late fifteenth century and it was commonly used by the early writers on seamanship. Its design has remained almost fixed down to the present—a tapered piece of metal, round in section, the thicker end sometimes flat, sometimes knobbed. The spike seems to have been used at first with only the smallest cordage, the stuff from which it takes its name. Boteler says of them: 'They are small Nails of Iron made of purpose for the splicing together of small Ropes; as also to open the Bolt-ropes when they sew them into the Sails.' A true sailmaker's spike never has a lanyard eye (a sailor's spike always should) and frequently it had a wooden handle like that usually found on a chisel (figure 5f). The spike always has the same functions: to lay open the strands of a rope or to start a hole through a piece of cloth.

Close akin to the marlin spike were the *prickers* (figure 6e and f) and *stabbers* (figure 6c). The first was originally square in section; the second triangular and smaller than the pricker. Both had wooden handles. Eventually they lost their angular sections and differed from the spike only in size. Smyth, in fact, describes both as being 'small marline spikes.' Their function was the same as those of the spike but for use with smaller stuff. Both have been in use since 1794 at least. For making the smallest holes in cloth a *pegging awl* (figure 6a and b) was used. Steel described it in 1794 as having a round blade becoming square at the point.

Another family of tools is that used to tighten stitches beyond the power of the roping palm or the thumb stall. The oldest of these is the *serving* or *heaving mallet* (figure 7a, b, and c). It is mentioned by Davis in the outfitting list of 1676. It has carried through until the present time in some sailmaker's outfits, primarily because it is inexpensive, easily made, and adequate for the job. It was as early as 1732 and still is a hardwood cylinder about four to six inches long by one and a half inches diameter with a half-round groove along the face and a handle about a foot long by an inch diameter fixed at right angles to the head opposite the groove. The cord to be tightened is carried over the cylinder, or head, and around the handle which was pushed or pulled as a lever. The same tool is also used to serve boltropes. There are other types of serving mallets varying greatly in size but all follow more or less closely the same basic design. *Serving boards* (figure 7d, e and f), used for the same purpose but with smaller stuff, were known to Steel in 1794. More recent than the heaving mallet but used for the same purpose is the *heaver*, sometimes called a *stitching mallet* (figure 8). It probably dates from the 1860's and is apparently the most recent of all the sailmaker's tools, if the sewing machine be excepted. Since it is the product of a manufacturer, it has as many variants in detail as there are makers. Basically it is a T-shaped tool, the standing part of steel about six inches long; the cross piece or handle about three or four inches long of either steel or hard wood. The standing part is octagonal in section for most of its length with the end round in section and tapering to a blunt point. A hole about one-eighth of an inch in diameter and in depth is drilled into the end. The

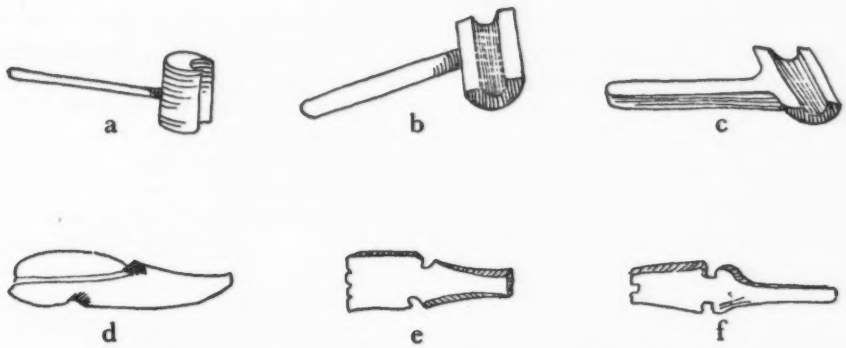


Fig. 7. SERVING TOOLS: *a, b and c, mallets; d, e and f, boards.*

heaver has two uses: to tighten stitches and to push a needle through cloth either too thick for the force of the palm or located in a spot the palm cannot reach. The first operation is performed by giving the twine a couple of turns around the standing part of the heaver, placing the end on the boltrope and twisting the handle (thereby forming a Spanish windlass) until the stitch is hove taut. In the second operation, the point of the needle is inserted in the cloth and the hole in the end of the heaver is placed over the eye of the needle; with one hand on the standing part of the heaver and the other on the handle, the strength of both arms and the back of the sailmaker can be brought to bear on the needle. What appears to be an early form of heaver is in the collection of The Mariners' Museum (figure 8a). Instead of being T-shaped it is straight with a wooden chisel handle, but the blade is identical to that described above.

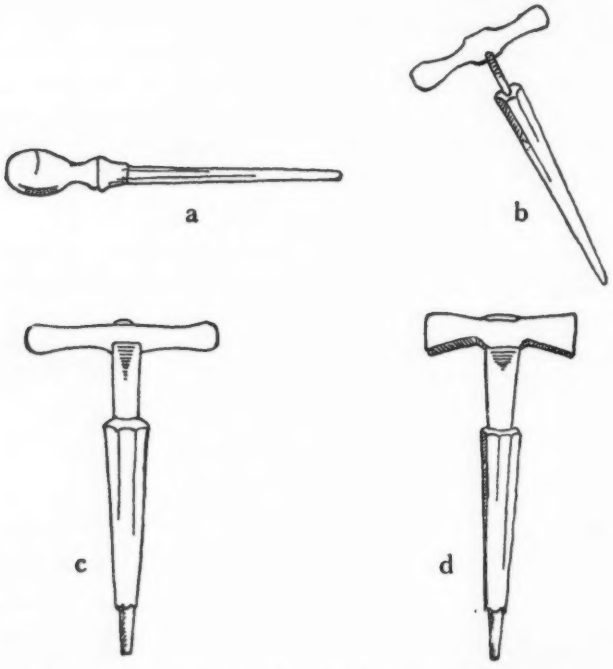


Fig. 8. HEAVERS: *a, early type; b, c and d, basic types.*

For cutting cloth, boltrope, and twine the sailmaker has apparently used a *knife* since the earliest days. It was and still is of the type known to cutlers as a 'sticking knife'. The facility with which cloth may be cut with this shape of blade exceeds any other. Today the sailmaker's knife has become in many cases anything that will cut cloth and cordage, usually a shoemaker's knife with a three to six-inch blade.

The last group of tools actually used in making sails is a miscellaneous aggregation with widely varying duties. The *rubber* in use as early as 1794 to flatten stitches and seams, was made of hardwood, bone, or iron usually chisel shaped. It continued in general use down to the late nineteenth century. It was simply run back and forth over the seams as the cloth lay on the floor until the stitches were partially buried in the cloth or until a crease was made. Another tool which has disappeared was the *seam gauge*. This device, made of bone or wood, was used by the sailmaker more or less as a carpenter uses a marking gauge; that is, to lay out a seam of proper width down a length of cloth, particularly along a gore. The tool is not mentioned in any marine dictionary or in any of the works on seamanship, and no specimens which can be dated have come to light. The *sail hook* is the last piece of specialized gear. It is a sharp hook some three to five inches long made of iron or steel.

There are three principal forms, the most recent of which, that made of rod with a swivel eye, is considered the least desirable. The second type is made of rod with a fixed eye and the third is made of flat bar, tapered to each end. The tool has been used since the late eighteenth century at least and still is in everyday use by all sailmakers. Spliced to the hook is a lanyard which is made fast to the right hand leg or end of the bench. It is used to keep the cloth tightly drawn over the knees of the sailmaker as he works. To extend and hold taut a length of boltrope while serving, the sailmaker makes use of a light watch tackle, the blocks being about three inches long.

(To be continued)

Notes of Interest

Sturbridge became a town in 1738. It's earliest industry was probably the country's first lead mine, known to the Indians before John Winthrop, Jr. began to operate it in 1644. Later there were the usual blacksmith shops, tannery, fulling mill, saw mills, and grist mills. By the end of the 18th century, ox-bows, sleds, carts, carriages, cabinet work, water wheels, cider barrels, wooden tubs, hay rakes, grain cradles, and bricks were among the products of Sturbridge.

The Woodworker in England

(Continued from page 205)

In 1579 the joiners of Newcastle claimed a monopoly of "sealing the houses within . . . dorments & windows, drawn tables of frame work, buffet stools, form, buttries and chists for corpses." In other English cities similar rules prevailed. Even home work was noted. The *Carpenters Rules* of Hull provided that "No joyner nor shipwright shall do carpenter's work—except for himself."

In France under the encouragement of Louis XIV the art of making fine furniture developed beyond the skill and abilities of English craftsmen. There was a demand for such furniture which they could not supply. Guild regulations prohibited hiring foreign workmen, but confronted with this condition, the joiners of Newcastle upon Tyne agreed that "Such as would learn the new art of cabinet making, could hire craftsmen from France and the Lowlands."

In 1671 we find the carpenters complaining that the "Joyners, carvers (and other woodworkers) were formerly but limbes and members and a part of Carpentry . . . their trade was chiefly to make joined ware, such as bedsteds, tables, chairs, stools—and to joine and ceele." The distinction between joiners and carpenters—according to the claim of the former—was that in general, by long precedent, anything joined or morticed belonged to them, anything nailed and not morticed was carpenters' work.

Joiners claimed a monopoly of "all bedsteds not boarded and nailed; stools and chairs—if morticed; chests and cupboards if 'duftailed' pinned or glewed; (clothes) presses if panelled; all wainscott and 'sealing' of houses; ornamental shop windows; doors and hatches when framed panelled and glewed; picture frames, lattices, carved signboard and other carvings and 'all work whatsoever invented being made by two aiges with the use of all manner of nayles'." Also coffins if made of wainscot (i.e. oak) but if made of cheaper wood, to be made by either the joiners or the carpenters. This, it is to be recalled is what the joiners claimed, and not what they were granted by the Council.

English craftsmen of the type so well portrayed in *The Village Carpenter* and the *Wheelwright's Shop* are not quite gone, even in this machine age. Massingham in *Country Relics* describes the methods and products of the "bodger," who was a turner of chair and table legs, bowls and the like.

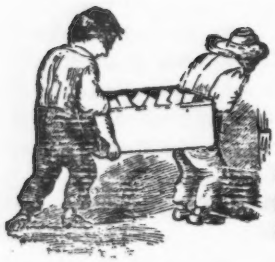
Bodgers went into the woods and selected the young beech trees for purchase and felling. They were then cut into suitable lengths and split, rough formed with axe and draw knife, and stacked to dry. Later they were cut to length for the lathe. The lathe, used for this purpose was a pole lathe such as described in *The Chronicle* for November, 1935. With this crude device the bodger turned legs, stretchers and fillers, locally known as Smoker, Squat-Front, Stick-Bat Stand, Wheel-Back, Roman Spindle and Duffer patterns. Massingham saw these men at work, probably 20 years ago, but in a recent *Illustrated London News*, it is noted that at least one bodger was seen at work as late as 1948.

References

York Rolls
Two Thousand Years of Gild Life*, Lambert
The Company of Carpenters, Jupp
English Craft Guilds, Kramer
The Gild Companies of London*, Unwin

*"Gild" is from title.

This is Part Two of an article in two parts.



The Chronicle

issued occasionally for members of

EARLY AMERICAN INDUSTRIES ASS'N

The purpose of the association is to encourage the study and better understanding of early American industry, in the home, in the shop, on the farm, and on the sea, and especially to discover, identify, classify, preserve and exhibit obsolete tools, implements, utensils, instruments, vehicles, appliances and mechanical devices used by American craftsmen, farmers, housewives, mariners, professional men, and other workers.

EDWARD DURELL, *President*
500 Dublin Ave., Columbus, Ohio
LORING MCMILLEN, *Vice-President*
Staten Island Historical Society
Richmond, Staten Island, New York
LEWIS N. WIGGINS, *Vice-President*
Shelburne Museum, Inc.
Shelburne, Vermont
MAJOR A. ERLAND GOYETTE, *Vice-President*
Peterborough, New Hampshire
MISS JANET R. MACFARLANE, *Recording Secretary*
Farmers Museum
Cooperstown, New York
MRS. IRMA P. ANDERSON, *Corresponding Secretary*
Ohio State Museum, Columbus, Ohio
MRS. FRANK D. PEIRCE, *Treasurer and Editor*
51 Paxton St., Leicester, Massachusetts

Communications regarding the *contents* of THE CHRONICLE should be addressed to the Editor; regarding *back numbers* to Loring McMillen; suggestions for *members* to any of the Officers; *all other matters* to the President. Addresses as here given.

DUES

The annual dues are payable January 1st, and are as follows: Regular members, $3.00; Supporting members, $5.00; Sustaining members, $10.00 and up. There is no distinction between classes, except the amount of dues, but THE CHRONICLE cannot be financed unless a considerable number of the members pay more than $3.00. Each member is expected to voluntarily place himself in the class which represents the amount he is willing to contribute to the support of the Association for the current year. Life membership costs $50.00. THE CHRONICLE is sent to all members without additional charge.

Editor's Comment:

For the third year, New York State Historical Association will hold Seminars on American Culture at Fenimore House and The Farmers' Museum, Cooperstown, N. Y. There will be two separate sessions each a week in length, July 2 - 8 and July 9 - 15.

Six subjects are included: Regional Survey of New York History; Problems of the Small Museum of History; Early American Crafts; Practical Problems in Writing Local History; Problems of the Small Historical Library; Folk Culture of the Northeast.

Museum people and the historically minded who are searching for a better understanding of the roots of American culture will find these seminars very helpful.

For information write to Louis C. Jones, Director, New York State Historical Association, Cooperstown, New York.

Until mid-July the New-York Historical Society has on exhibition an old Ramage-Bronstrup oak-frame hand-press dating from the early nineteenth century, and a Washington hand-press, along with a city stand or type rack, and other printing equipment of the period. This is in connection with an exhibition of non-technical books to present a retrospective view of book printing at the turn of the century. Address of the Society is 170 Central Park West, at 76th Street, New York City.

While we do not feel THE CHRONICLE is fulfilling its function by reprinting material produced by current writers, when we have an opportunity to re-print an article like *The Sailmaker's Gear* we take advantage of it.

It was brought to our attention by Mr. Lawrence W. Jenkins, Director Emeritus of The Peabody Museum, Salem, Massachusetts who is a charter member of EAIA. We are using it through the courtesy of Mr. M. V. Brewington, the author and Mr. Walter Muir Whitehill, editor of *The American Neptune*, where it was originally printed in October, 1949.

Mr. Brewington, we understand, knows more about the history of wooden shipbuilding than anyone in the country, and is in possession of a tremendous amount of material accumulated over the past twenty-five years.

We have some material ahead in the files, but we believe it to be the duty of every member either to supply a contribution of his own every now and then, or to persuade someone else to do so.

It is hoped that among the persons who have recently been admitted to membership, there will be a considerable number who will feel inspired to contribute informatory articles on subjects concerning which they have made research, or are authorities.

We also welcome writings in a lighter vein, such as experiences in collecting, stories of "old-timers" of their recollections of the earlier days. And please send in questions which will be of general interest.

Membership

It is with deep regret that we mention the untimely death of Mr. Rudolf P. Hommel on March 18th. Mr. Hommel and a friend driving a new station wagon experienced a head-on collision with an oil truck at Chester, Pa., March 14th.

Mr. Hommel was an early member of EAIA and a member of the Board of Directors for several terms. He contributed many articles to THE CHRONICLE, and was the author of *China at Work,* a notable book of Chinese life on which he spent eight years of research in rural districts of China.

Membership lists should be amended as follows:

(Ch) indicates change of address
(D) indicates decease
(N) indicates new member

CALIFORNIA

Bakersfield: Kern County Museum, Fair Grounds, North Chester Avenue (1569) (N)

Berkeley 4: Department of Decorative Art, University of California (1582) (N)

DELAWARE

Winterthur: Montgomery, Mrs. Charles F. (1230) (Ch)

DISTRICT OF COLUMBIA

Washington 9: Way, Mr. Elwood J., 1608-20th Street, N. W. (1469) (Ch)

KANSAS

Salina: Brock, Mr. C. E., Box 59 (1570) (N)

MASSACHUSETTS

Concord: Thomas, Mr. Edward, Westford Road (1566) (N)

East Pepperell: Hayes, Mr. Harold J., High Street (1573) (N)

Harvard: Harrison, Mr. W. H., Fruitlands (1568) (N)

Hopkinton: Wescott, Mr. W. B., Pond Street (1111) (Ch)

Kingston: Barnes, Mrs. W. G., R.F.D. 380 (1243) (D)

Somerville: Burkard, Mr. Ralph F., 5 Middlesex Avenue (1572) (N)

Worcester: Heald, Mr. Richard A., 10 New Bond Street (1584) (N)

MISSOURI

St. Louis 4: Rand, Mr. William M., Monsanto Chemical Company (1576) (N)

NEW JERSEY

East Orange: Hartshorne, Mrs. Richard, 168 Park Street (1567) (N)

East Orange: Lufkin, Mr. H. D., 253 Dodd Street (100) (D)

Montclair: Tomlinson, Mr. Roy E., 89 Llewellyn Road (1575) (N)

Upper Montclair: Vail, Mr. Harry H., 350 Highland Avenue (1456) (D)

Whippany: Conlon: Mrs. Martha Rever, R.F.D. 1, Columbia Road (1581) (N)

NEW YORK

Groveland: Underwood, Mrs. I. J. (1571) (N)

New York City 18: Alk, George, 1501 Broadway (332) (Ch)

New York City 22: Jackson, Mr. George B., 159 East 54th Street (1578) (N)

New York City 61: Robotti, Mrs. Frances Diane, 2109 Gleason Avenue (1583) (N)

New York City 17: Rogers, Mr. Ralph K., 342 Madison Avenue (1574) (N)

New York City 20: Sargent, Mr. Noel, 14 East 49th Street (1579) (N)

OHIO

Toledo 1: Canaday, Mr. Ward M., 4455 Brookside Road (1577) (N)

Warren: Fales, Mrs. Edward C., 406 Roselawn Avenue, N. E. (1580) (N)

PENNSYLVANIA

Rummerfield: Hadlock, Mr. F. D., R.F.D. 1 (1022) (Ch)

Richlandtown: Hommel, Mr. Rudolf P., "Gargoyle" (247) (D)

Shawnee-on-Delaware: Sittig, Mr. Edgar H. (1238) (Ch)

VIRGINIA

Norfolk 7: Hatch, Mr. John Davis, Jr., Norfolk Museum (637) (Ch)

The Chronicle

Communications

From Ralph Green, Chicago, Illinois

"Many local museums and historical societies have in their possession an old hand printing press, used by the first printer in the state or county, and on which was printed the first newspaper in the vicinity. Usually such presses do not bear a name plate or carry the name of the maker and place or date of origin. If this information is desired the writer would be only too happy to supply such data. As a hobby he has spent many years gathering information and inspecting old presses.

"Write Ralph Green, 332 South Michigan Avenue, Chicago 4, Illinois, with a brief description of the press. If available a picture would, of course, be preferred."

From J. Almus Russell, Bloomsburg, Pa.

"I have a collection of old wooden trunks of various shapes and sizes, collected around my summer home at Mason, New Hampshire. Some have flat tops, some have round lids, some are studded with brass nails and covered with clipped hides. Two of the trunks are lined with Boston newspapers of the 1835 period—circumstantial evidence of their age.

"I wish to write up the story of their manufacture (or hand-production), distribution, and use, but have been unable to find out anything in the books or articles at my disposal. The Widener Library at Harvard informs me that they have no books on the subject. One luggage concern sent a little material about English trunks but the brochure dealt mostly with the process of tanning the hides which were used in leather baggage or for the trunk coverings.

"Possibly some of the members of EAIA may be able to give me some leads in my projected research."

BLOWPIPE was invented in 1801 by Professor Robert Hare of Philadelphia, Pa., who called it a "hydrostatic blowpipe." He reported his discovery to the Chemical Society of Philadelphia, *"A Memoir of the Supply and Application of the Blow-Pipe, Containing an Account of the new method of supplying the Blow-Pipe either with common air or oxygen gas; and also of the effects of the intense heat produced by the combustion of the hydrogen and oxygen gases."*

BICYCLE PATENT was granted to William K. Clarkson, Jr., of New York City on June 26, 1819 for an "improved curricle." Bicycles were then known as "curricles" and "velocipedes."

Annual Meeting

The 18th annual meeting of the Early American Industries Association will be held at Old Sturbridge Village in Sturbridge, Massachusetts on Friday and Saturday, June 16th and 17th. There are many exhibits of particular interest to the Association's members such as firearms, guntools, locks and keys, and surveying instruments in the Museum of Firearms; glass-blowing tools and spectacle-making tools in the Spec Shop; the Print Shop; Wood-working Tools collection; Cabinet Shop; Shoe Shop; Blacksmith's Shop; Grist Mill; Up-and-down Saw Mill; and Farm Implements in the Gebhard Barn.

Mr. Earle Newton, Director of the Village is general chairman of the meeting and preliminary plans are as follows:

Friday, registration will be made at the Village office, and the day left free for visits to the various exhibits.

A board meeting will be held at 4 p.m. and the banquet will be in the Great Room of the recently constructed Tavern in the Village grounds, at 7 p.m.

Saturday, speakers include Carl W. Drepperd, member of EAIA and author of many books interesting to members, and Dr. Dirk Jan Struik, author of "Yankee Science in the Making."

There will be a "What's it" identification period and members are urged to bring all their unidentified items to the meeting. There will be experts galore to help.

All rooms at Publick House have been set aside for members of EAIA for June 16th, but it is advisable to make individual reservations early, and mention the Association and meeting when writing.

Rates:	Twin beds with bath	$9. to $11.
	Single rooms with Bath	6. to 8.
	Others	5. to 7.

AUGER (Screw auger) was manufactured in 1810 by Walter French at Seymour, Conn. He was also the first to put a screw point on them. Previously, only pod augers without screws had been used and a gouge was required to start the hole before an auger could be made to work.

BELT CONVEYOR SYSTEM is described by Oliver Evans in his book, *The Young Millwright and Millers Guide* published in Philadelphia, Pa., in 1795. It illustrated a flat belt receiving material on its upper run and discharging it over the end, on a broad endless strap of thin pliant leather or canvas revolving over two pulleys in a case or trough.